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ABSTRACT

A new treatment, the Vocational Exploration and Insight Kit (VEIK), was developed to increase the number and variety of vocational options a person considers, to increase the variety of information-seeking activity, and to increase the satisfaction a person has with his or her current vocational aspiration. The VEIK is a 15-step self-administered treatment. A person begins with a revised Vocational Card Sort (VCS), uses the Self Directed Search (SDS) and its interpretative booklet, and fills out an Action Plan designed to stimulate vocational exploration activity. The effects of VEIK were evaluated in a one-factor, three-level experiment in which 252 high school girls were randomly assigned to the VEIK, the VCS, or the SDS. The multi-variate test was significant, but the individual components of VEIK--the VCS and the SDS--equaled or exceeded the VEIK in their exploratory effects. These outcomes are ambiguous, but they are consistent with earlier experiments which indicate that different vocational treatments have similar rather than divergent effects. (Author)

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The Relative Influence of the Vocational Card Sort, the Self-Directed Search, and the Vocational Exploration and Insight Kit on High School Girls

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Abstract

A new treatment, the Vocational Exploration and Insight Kit (VEIK), was developed to increase the number and variety of vocational options a person considers, to increase the variety of information-seeking activity, and to increase the satisfaction a person has with their current vocational aspiration. The VEIK is a 15-step self-administered treatment in which a person begins with a revised Vocational Card Sort (VCS), uses the Self Directed Search (SDS) and its interpretative booklet, and fills out an "Action Plan" designed to stimulate vocational exploration activity. The effects of VEIK were evaluated in a one-factor, three-level experiment in which 252 high school girls were randomly assigned to the VEIK, the VCS, or the SDS. The multivariate test was significant ($P < .05$), but the individual components of VEIK--the VCS and the SDS--equalled or exceeded the VEIK in their exploratory effects. These outcomes are ambiguous, but they are consistent with earlier experiments which indicate that different vocational treatments have similar rather than divergent effects.

The Relative Influence of the Vocational Card Sort, the Self-Directed Search, and the Vocational Exploration and Insight Kit on High School Girls

Experimental studies of the influence of interest inventories on clients are a recent development. So far, the first experiments (Avallone, 1974; Byrne, in press; Cooper, 1976; Holland, Tokai, Gottfredson & Hanau, in press; Krivatsy & Magoon, 1976; McGowan, 1977; Nelson, 1975; Nolan, 1974, Prediger, McLure & Noeth, Note 1; Redmond, 1973; Rhodes, 1973; Schaefer, 1976; Zener & Schnuelle, 1976; Zytowski, 1977) indicate that inventories have relatively small effects. In addition, it is clear that diverse inventories have very similar effects despite gross differences in their methods of development, inventory format, and procedures for reporting results to the client, and that inventories appear as influential as counselors.

A new vocational treatment, the Vocational Exploration and Insight Kit (VEIK; Holland, 1977), was stimulated by this earlier work. We assumed that a more influential vocational intervention would result, if we could integrate a Vocational Card Sort (VCS), the Self Directed Search (SDS), and its instructional booklet, Understanding Yourself and Your Career (Holland, 1977), and an "action plan" (Weissman & Krebs, 1976) in a single set of coordinated learning experiences. We also assumed that the individual effects of the VCS (an unstructured experience), the SDS (a structured experience), the Understanding Yourself... booklet (a structured experience), and the modules concerned with biases (sex, age, race and social class) and with vocational planning would combine to produce greater effects on the client than the effects of any single treatment. The present experiment tests this assumption by comparing the effects of the VEIK, the VCS, and the SDS using five criteria to assess

the impact of these diverse treatments.

Method

Subjects The participants were 252 high school girls in a suburban, Catholic high school. All students were volunteers from the tenth and eleventh grades. Their ages ranged from 14 to 18; the median age was 16.

Treatments The three vocational treatments described below were developed so that each was self-administered and could be used with little or no assistance from counselors or teachers.

1. A revised Vocational Card Sort. This form was derived from the work of Cooper (1976), Dolliver (1967), Dewey (1974), and Tyler (1961) and includes nine steps which instruct the user to sort occupational titles (the first six scales of the Vocational Preference Inventory, Seventh Revision, Gottfredson, Holland & Holland, 1977), to rationalize tentative selections and rejections, to rationalize any reliance on sex, race, religion, or social class, and to consider some next steps based on the "Next Steps" section of the Self Directed Search.

In general, the present VCS differs from earlier forms in several ways: it entails a few more steps; it contains a specific step developed to confront a person with the role that sex, race, religion, or social class may have played in the sorting of occupational titles; it contains other steps to stimulate insight about "needs, hopes, talents, personal weaknesses, distasteful activities and roles"; and it concludes with a "Some Next Steps" section to encourage more exploration.

The use of the VPI scales (14 occupational titles each) is assumed to be an improvement over earlier versions of the VCS, because the VPI scales form homogeneous scales, and because the main occupational categories are equally represented. For example, the Dewey VCS provides a

very uneven distribution of occupational titles--only 10 Realistic titles --but 21 Social titles, etc. In addition, occupational titles are assumed to be more ambiguous and less stereotyped in their implications than activity items. For example, compare "accountant" with "keep records and ledgers."

2. The Self Directed Search (Holland, 1972) and an interpretive booklet, Understanding Yourself and Your Career (Holland, 1977). The interpretative booklet is assumed to increase the self-directed quality of the SDS and its influence on the user, because it includes a brief but comprehensive summary of the typology, some steps for evaluating a person's vocational choices, and some useful vocational references.

3. The Vocational Exploration and Insight Kit (VEIK). The VEIK is an elaborate 15-step treatment in which a person begins with the revised VCS, uses the SDS and its interpretative booklet, and finally fills out an "Action Plan" designed to confront and stimulate commitment to additional vocational exploration activities. The directions tell the user to complete the VEIK in several sessions on different days. The VEIK takes about 2 to 3 hours to complete.

Questionnaires: The pre-questionnaire included identifying information, a free-response item about current vocational aspirations, and a "satisfaction with vocational choice" item. Both items were taken from Zener and Schnuelle (1976). A student's vocational aspirations in the pre- and post-questionnaires were scored in two ways: (1) the total number of occupations listed and (2) the variety of occupations listed, or the number of different occupational categories according to their first letter code in Holland's classification so that scores could range from 1 to 6.

The post-questionnaire repeated the items in the pre-questionnaire and included a 10-item scale developed to measure satisfaction with the

treatment. These items formed a scale of moderate internal consistency (α = .79). An additional section assessed what vocational exploration activities a student had engaged in such as visiting places of employment. This section was a revision of a very similar Zener and Schnuelle criterion (1976).

Procedure: Students were randomly assigned to one of the three treatments. The pre-questionnaires were given to students and collected before they were allowed to use the treatments. Students were told that they would have about one hour to work on their vocational materials. It was made clear to the students that those who did not finish before the end of the period would be able to take the materials with them and finish later.

Three weeks later, the post-questionnaire was administered. Of the 252 students who received one of the three treatments, 242 (96%) were present for the post-questionnaire session. At this session, any questions that students had about the treatments were answered after the post-questionnaires were completed.

Results

There were five criteria which could be used to compare the effects of the three treatments: number of occupations, variety of occupations, satisfaction with vocational choice, satisfaction with the treatment (the satisfaction scale), and number of information-seeking activities. In order to determine the dimensions formed by the five criteria, a factor analysis was performed.

The factor analysis (using the SPSS program FACTOR) produced a three-factor solution, but a two-factor solution was chosen because the third factor only accounted for the variance of a single variable. The eigenvalue was only 1.02.

The criteria--number and variety of occupations--loaded highly

(.57 and .70 respectively) on the first factor. However, the variable, number of occupations, had a moderate loading (.28) on the second factor. Because of its loadings on two factors, and its moderate correlation (.39) with variety of occupations, the criterion, number of occupations, was omitted from the multivariate analysis of variance.

The second factor was mainly composed of the satisfaction scale and the information-seeking criteria. In this case, the satisfaction scale had a much higher loading (.59) than the information-seeking criterion (.23). The information-seeking criterion was dropped from the multivariate test because it had a relatively low factor loading and was correlated (.23) with the satisfaction scale.

A multivariate analysis of variance (using the Miami program MANOVA) was then performed using two criteria--the variety of occupations and the satisfaction scale. In addition, univariate analyses were performed on each criterion.

The F-ratio obtained from the multivariate analysis on the one-factor, three-level experiment is significant, $F(4, 474) = 2.63$, $p < .05$. The univariate test for variety of occupations is significant, $F(2,238) = 4.69$, $p < .01$. The univariate test for the satisfaction scale was not significant, $F(2,238) = .61$, $p < .54$.

An inspection of the means and standard deviations in table 1 shows

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Insert table 1 about here

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that our main hypothesis is not supported by either the one statistically significant univariate test or the trends in the data. Instead, the SDS had a greater effect on the variety of occupations considered after treatment, $t(161) = 3.03$, $p < .01$, than the VEIK did. The difference between means of the VCS and the SDS on the variety criterion favored the SDS, but the difference is not statistically significant. On all five criteria, the means for the SDS always exceed those for the VCS or VEIK.

Discussion

The failure of VEIK to surpass the influence of its components (the VCS and the SDS) is puzzling. This outcome creates ambiguity rather than suggests one or two plausible explanations. The SDS surpassed VEIK in its influence on the variety of options a high school girl considers although VEIK included the entire SDS, supplemented by the VCS and an Action Plan. On the other hand, when the VCS is used as a separate treatment, its effects equal those for the SDS, although the only thing they have in common is the same set of 84 titles and similar "Next Steps" sections. Conceivably, an order effect may occur in the VEIK, because the VCS is used first and is followed by the SDS. We do not know what would happen if the order were reversed. Perhaps, a ceiling effect is quickly reached with any treatment so that subsequent treatments are ineffective.

The results are consistent with the 14 experiments cited earlier in which the effects of the ACT IV, KOIS, SDS, SCII, or the VCS were examined. Again, we are struck by three interpretations of the outcomes of these studies: (a) diverse vocational interventions have similar rather than divergent effects, (b) the effects are usually small, and (c) in this instance, an attempt to increase effects by combining several vocational interventions failed.

Perhaps the ambiguities in the past and present results can be resolved in new experiments by trying to link vocational treatments to client needs in a more analytical fashion. Although most people in these experiments were volunteers, their degree of need, vocational maturity, interpersonal competency and decisiveness probably varied greatly. In addition, it may be instructive to link outcome variables to individuals. For example, some people require or need exploration and some do not. Some people obtain greater satisfaction from taking an interest inventory, but

others should be shaken up or at least stimulated to reconsider. People may have their options focused or narrowed by a vocational treatment, and this outcome may be constructive for some but not for others.

Although this experiment was performed to see if we could develop a more influential treatment, the results also had some clear implications for the interest inventory controversy--a structured inventory and its interpretative booklet stimulated high school girls to consider a slightly greater, but not statistically significant, variety of vocational alternatives than did the VCS, an unstructured experience in which girls create their own categories or structure. These results are expecially persuasive when we realize two things: (1) high school girls have a very limited range of vocational aspirations so that any experience that presents many vocational options will probably increase their range of vocational alternatives. And (2) the only way any interest inventory could maintain the status quo would be if it had both perfect concurrent validity, and if it reinforced only a single aspiration--the aspiration a girl or boy expresses before she/he takes an inventory. Because such an inventory does not exist, it is reasonable to assume that the SDS, and probably all other inventories, increase the range of options a high school student considers.

Reference Note

1. Prediger, D. J., McLure, G. T., & Noeth, R. J. Promoting the exploration of personally relevant career options in science and technology. National Science Foundation Grant No. SMI 75-18149 A 01, American College Testing Program, Iowa City, 1976.

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Table 1

Means and Standard Deviations of the Five Criteria

	Treatments							
	VCS (N=80)		SDS(N=85)		VEIK(N=76)		All Groups(N=241)	
Criteria	X	SD	X	SD	X	SD	X	SD
Number of Occupations	3.59	1.08	3.91	1.15	3.50	1.30	3.67	1.19
Variety of Occupations	2.29	.80	2.49	.85	2.11	.76	2.30	.82
Satisfaction with Choice	4.29	1.78	4.34	1.78	4.08	1.91	4.24	1.82
Satisfaction Scale	27.34	6.57	28.37	6.06	28.17	6.08	27.97	6.23
Variety of Information-Seeking Activities	8.11	2.73	8.58	2.67	8.09	3.06	8.27	2.81

Footnote

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